

- along the Path of Total Eclipse of the Sun, May 28, 1900. Observations of 1899.
210. Monthly Weather Review for September, 1899. Vol. XXVII, No. 9.
211. Bulletin No. 28. A. G. McAdie and Geo. H. Willson. The Climate of San Francisco, Cal.
212. Monthly Weather Review for October, 1899. Vol. XXVII, No. 10.
213. A. J. Henry and N. B. Conger. Meteorological Chart of the Great Lakes. Summary for the Season of 1899.
214. Monthly Weather Review for November, 1899. Vol. XXVII, No. 11.
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216. Monthly Weather Review and Annual Summary for 1896. Vol. XXVII, No. 13.
217. Monthly Weather Review for January, 1900. Vol. XXVIII, No. 1.
218. Monthly Weather Review for February, 1900. Vol. XXVIII, No. 2.
219. * Bulletin No. 29. A. G. McAdie. Frost Fighting.
220. Monthly Weather Review for March, 1900. Vol. XXVIII, No. 3.
221. Bulletin G. F. W. Very. Atmospheric Radiation.
222. Monthly Weather Review, for April 1900. Vol. XXVIII, No. 4.
223. C. F. Marvin. Anemometer Tests. Extract from Monthly Weather Review.
224. Monthly Weather Review for May, 1900. Vol. XXVIII, No. 5.
225. Monthly Weather Review for June, 1900. Vol. XXVIII, No. 6.
226. Monthly Weather Review for July, 1900. Vol. XXVIII, No. 7.
227. H. C. Frankenfield. Daily River Stages, at the River Gage stations on the Principal Rivers of the United States, Part VI., for 1896, 1897, 1898, and 1899.
228. H. C. Frankenfield. Tables of Daily Precipitation.
229. Monthly Weather Review for August, 1900. Vol. XXVIII, No. 8.
230. Monthly Weather Review for September, 1900. Vol. XXVIII, No. 9.
231. Report of the Chief of the Weather Bureau for 1900. 8 vo. Also reprinted as Part I of the quarto edition of the Report 1899-1900.
232. Bulletin H. E. B. Garriott. West Indian Hurricanes.
233. C. F. Marvin. Anemometry. Circular D, Instrument Division. Second Edition.
234. Monthly Weather Review for October, 1900. Vol. XXVIII, No. 10.
235. C. F. Marvin. Psychrometric Tables.
236. Monthly Weather Review for November, Vol. XXVIII, 11.
237. A. J. Henry and N. B. Conger. Meteorological Chart of the Great Lakes. Summary for the Season of 1900.
238. Monthly Weather Review for December, 1900. Vol. XXVIII, No. 12.
239. Monthly Weather Review. Annual Summary for 1900. Vol. XXVIII, No. 13.
240. Monthly Weather Review for January, 1901. Vol. XXIX, No. 1.
241. C. F. Marvin. Circular F. Barometers and measurement of atmospheric pressure. Instrument Division, Second Edition.
242. Monthly Weather Review for February, 1901. XXIX, No. 2.
243. Monthly Weather Review for March, 1901. Vol. XXIX, No. 3.
244. A. J. Henry and N. B. Conger. Meteorological Chart of the Great Lakes, No. 1, 1901.

245. Monthly Weather Review for April, 1901. Vol. XXIX, No. 4.
246. Monthly Weather Review for May, 1901. Vol. XXIX, No. 5.
247. Monthly Weather Review for June, 1901. Vol. XXIX, No. 6.
248. * D. T. Maring. Weather Bureau Exhibit at the Pan-American Exposition. Buffalo, N. Y., 1901. Reprint from Monthly Weather Review.
249. Monthly Weather Review for July, 1901. Vol. XXIX, No. 7.
250. Instructions to Voluntary Observers. Second edition.
251. Monthly Weather Review for August, 1901. Vol. XXIX, 8.
252. C. F. Marvin. Instructions for the Care and Management of Sunshine Recorders. Circular G, Instrument Division. (Second Edition of No. 109.)
253. Monthly Weather Review for September, 1901. Vol. XXIX, No. 9.
254. F. W. Very. The Solar Constant. Reprint from Monthly Weather Review.
255. Monthly Weather Review for October, 1901. Vol. XXIX, No. 10.
256. Bulletin No. 30. A. J. Henry. Loss of Life in the United States by Lightning.
257. Monthly Weather Review for November, 1901. Vol. XXIX, No. 11.
258. A. J. Henry and N. B. Conger. Meteorological Chart of the Great Lakes. No. 2, 1901.
259. Monthly Weather Review for December, 1901. Vol. XXIX, No. 12.
260. Monthly Weather Review. Annual Summary, 1901. Vol. XXIX, No. 13.
261. Monthly Weather Review for January, 1902. Vol. XXX, No. 1.
262. A. J. Henry. Bulletin J. Wind Velocity and Fluctuation of Water Level on Lake Erie.
263. Monthly Weather Review for February, 1902. Vol. XXX, No. 2.
264. A. J. Henry and N. B. Conger. Meteorological Chart of the Great Lakes. No. 1, 1902.
265. Bulletin No. 31. James Berry. Proceedings of the Second Convention of Weather Bureau Officials, held at Milwaukee, 1901.
266. Monthly Weather Review for March, 1902. Vol. XXX, No. 3.
267. Bulletin I. F. H. Bigelow. Eclipse Meteorology and Allied Problems.
268. Bulletin No. 32. W. H. Alexander. Hurricanes: Especially those of Porto Rico and St. Kitts.
269. Monthly Weather Review for April, 1902. Vol. XXX, No. 4.
270. Monthly Weather Review for May, 1902. Vol. XXX, No. 5.
271. Monthly Weather Review for June, 1902. Vol. XXX, No. 6.
272. Monthly Weather Review for July, 1902. Vol. XXX, No. 7.
273. * F. H. Bigelow. Studies on the Statics and Kinematics of the Atmosphere in the United States. Reprint from Monthly Weather Review.
274. Monthly Weather Review for August, 1902. Vol. XXX, No. 8.
275. Monthly Weather Review for September, 1902. Vol. XXX, No. 9.
276. Monthly Weather Review for October, 1902. Vol. XXX, No. 10.
277. C. F. Marvin. Instructions for Obtaining and Tabulating Records from Recording Instrument. Circular A, Instrument Division. Second Edition.
278. Monthly Weather Review for November, 1902. Vol. XXX, No. 11.

THE WEATHER OF THE MONTH.

By W. B. STOCKMAN, Forecast Official, in charge of Division of Records and Meteorological Data.

CHARACTERISTICS OF THE WEATHER FOR NOVEMBER.

Over the eastern two-thirds of the United States the month was unusually warm, with daily mean departures of $+3.6^{\circ}$ to $+8.4^{\circ}$ from the normal; in a number of the States it was the warmest November since the establishment of Climate and Crop services. In the Rocky Mountain slope districts the mean daily excess of temperature was not quite so large. In the Plateau and Pacific regions the average daily temperature ranged from normal to 1.6° below the normal by districts; but taking the States individually, California showed a daily mean deficiency of 2.4° and Arizona 2.5° .

The isotherm of 65° crosses northern Florida, Texas generally, and Louisiana, about latitude 30° north; of 70° over north-central Florida, and 75° over southern Florida. None of these three isotherms appeared on the chart for November, 1901. Generally east of the one hundredth meridian the remaining isotherms lay considerably northward of their position in November, 1901.

The precipitation was slightly below the normal in the Middle Atlantic and east Gulf States, Ohio Valley and Tennessee, North Dakota, and the northern slope; 1.6 inches below in the lower Lake region, and 2.9 inches below in New England. In the other geographical districts it ranged from normal to 3.5 inches above.

The relative humidity was normal in the Florida Peninsula and upper Lake region; 2 per cent below normal in North Dakota; and above normal from 1 per cent to 17 per cent in the remaining geographical districts, the most marked departures, $+12$ per cent and $+17$ per cent, occurring in the middle and southern slope districts, respectively.

The cloudiness was 5 per cent below the average in the lower Lake region, and from 5 per cent to 24 per cent above normal in the remaining districts, the greatest departures, $+22$ per cent and $+24$ per cent, occurring, as did the excess in relative humidity, in the middle and southern slope regions, respectively. In New England, and other districts where the precipitation was deficient, these conditions were anomalous.

PRESSURE.

The distribution of monthly mean pressure is shown graphically on Chart VI and the numerical values are given in Tables I and VI.

The area of highest mean pressure, with readings of 30.05 to 30.11 inches, overlay the eastern part of the west Gulf States and thence eastward and northeastward over the lower Lake region and New England to the Atlantic Ocean, the crest overlaying the Appalachian Mountain districts. Another high area, but of a somewhat lower pressure, overlay the mid-

dle California coast, northern California, and southern Oregon.

The mean pressure was low, less than 29.90 inches, in Arizona, southwestern New Mexico, and extreme southwestern Texas, also in western North Dakota, northern and eastern Montana and northwestern Washington, in which last-named region it was lowest, somewhat below 29.85 inches. In New England and the northern part of the Middle Atlantic States the mean pressure was slightly above the normal; in all other districts it was below normal, the greatest departure being over the northwestern quarter of the country. The pressure was higher than in October, 1902, in the Atlantic and east Gulf States, the lower Ohio, central Mississippi, and lower Missouri valleys, and west of the one hundred and tenth meridian of longitude and south of the forty-fourth parallel of latitude, the greatest changes occurring over Florida, northern and central California, and western Nevada.

TEMPERATURE OF THE AIR.

The distribution of monthly mean surface temperature, as deduced from the records of about 1,000 stations, is shown on Chart VI.

From the Gulf of Mexico northward into Canada and from the one hundredth meridian of longitude eastward to the Atlantic Ocean the temperature showed a mean daily departure of $+4.0^{\circ}$ to $+9.7^{\circ}$. Over the greater portion of this area the departures were $+6^{\circ}$ or more, with the greatest departures in the Ohio and central Mississippi valleys, lower Lake region, and the southern part of the upper Lake region.

The following States report it the warmest November on record: Indiana, Kentucky, Michigan, Ohio, Mississippi, and Missouri, except the northwestern section; and in New England and North Dakota it was exceeded but once. In North Carolina it was the warmest in twenty years, New Jersey in seventeen years, Kansas in sixteen years, West Virginia in twelve years, and Georgia since 1891. At Milwaukee, Wis., the mean temperature for the month was the highest in thirty-one years and at Green Bay in seventeen years, but in the western portion of the State it was slightly below the highest mean. At St. Louis, Mo., it was the warmest November, excepting one, in seventy-seven years.

The average temperature for the several geographic districts and the departures from the normal values are shown in the following table:

Average temperatures and departures from normal.

Districts.	Number of stations.	Average temperatures for the current month.	Departures for the current month.	Accumulated departures since January 1.	Average departures since January 1.
		°	°	°	°
New England	8	44.0	+4.2	+8.0	+0.7
Middle Atlantic	12	51.0	+6.3	+3.9	+0.4
South Atlantic	10	60.8	+5.8	+0.8	+0.1
Florida Peninsula*	8	70.1	+3.5	+3.3	+0.3
East Gulf	9	61.6	+5.4	+6.2	+0.6
West Gulf	7	62.7	+6.4	+11.8	+1.1
Ohio Valley and Tennessee	11	53.1	+8.0	+3.2	+0.3
Lower Lake	8	47.5	+8.4	+6.6	+0.6
Upper Lake	10	41.4	+8.0	+12.2	+1.7
North Dakota*	8	28.4	+5.3	+17.8	+1.6
Upper Mississippi Valley	11	45.7	+8.3	+10.7	+1.0
Missouri Valley	11	42.1	+5.2	+11.7	+1.1
Northern Slope	7	33.6	+0.9	+13.6	+1.2
Middle Slope	6	45.1	+3.8	+13.0	+1.2
Southern Slope*	6	52.9	+3.6	+14.2	+1.3
Southern Plateau	13	45.3	-0.4	-1.1	-0.1
Middle Plateau*	9	36.6	-0.9	+0.9	+0.1
Northern Plateau	12	36.8	0.0	+5.4	+0.5
North Pacific	7	45.6	+0.2	+4.1	+0.4
Middle Pacific	5	52.6	-1.0	-0.4	0.0
South Pacific	4	55.9	-1.6	-5.8	-0.5

*Regular Weather Bureau and selected voluntary stations.

In Canada.—Prof. R. F. Stupart says:

A phenomenally high mean temperature prevailed over the region of the Great Lakes and thence westward to Manitoba and eastward in the

St. Lawrence Valley to below Montreal, a positive departure of 7° being recorded in many localities, including Toronto, where continuous observations since 1830 show that the month just closed was the mildest November on record. Westward from Winnipeg the positive departure diminished to just normal at Swift Current, and over the greater part of Alberta and northern British Columbia there was a negative departure of 3° or more. In southern British Columbia the departure was from zero to 3° below the average. The more easterly portions of Quebec and the whole of the Maritime Provinces showed a positive departure from average of from 2° to 3° .

The first general killing frost or freezing weather occurred in New Mexico on the 3d; northern Indiana, 7th; northwestern Texas, 17th; central and southern Indiana, 23d; Kansas, 25th; and Georgia, Mississippi, and North Carolina, 28th. Heavy or killing frosts occurred in Louisiana and in parts of South Carolina on the 27th, and were general in the latter State on the 28th. The first ice was reported in South Carolina on the 28th.

Maximum temperatures of 80° or higher occurred in the greater portion of the Gulf States and in parts of the South Atlantic States, central Appalachian Mountain districts, central Mississippi and lower Ohio valleys, southern middle slope, and in western Arizona and southern California.

The isotherm of freezing temperature closely approached the south Atlantic and east Gulf coasts; retreated to the northward over the west Gulf States as far as extreme southern Arkansas and south-central Texas, and overlay south-central and southwestern Arizona and extreme southern California, and approached near to the coast of south-central and central California. The trend of the isotherm of zero temperatures was across northern Minnesota, eastern and extreme northwestern North Dakota and extreme northeastern Montana.

PRECIPITATION.

In central Florida, central Georgia, west-central California, west-central Nevada, and generally from northeastern Utah, southeastern Idaho and eastern Montana eastward to the Atlantic Ocean, excepting in eastern Minnesota, northern Wisconsin and upper Michigan, the precipitation was below the normal; elsewhere it was above the normal, the greatest excesses being from 2 inches to 4.8 inches in north-central and extreme southern Florida, and southeastern Georgia; 2 inches to 5.8 inches in northwestern Arizona; and 2 inches to 9.1 inches in eastern Texas, northern and western Arkansas, and Oklahoma and the Indian Territory, the greatest excess occurring in west-central Arkansas. In Missouri and Kansas the average amount of precipitation was the greatest during any November in twenty years, while in North Dakota it was the next to the least. Rainfalls in monthly amounts of from 10 inches to 22 inches were reported from eastern Texas, Oklahoma and the Indian Territory, southwestern Arkansas, and from northwestern California northward over the western parts of Oregon and Washington.

Snows occurred except along the Pacific, east Gulf and south Atlantic and Middle Atlantic coasts, and in the west Gulf States, the amounts, however, in the Middle Atlantic, South Atlantic and east Gulf States, Ohio Valley and Tennessee, and thence westward over Missouri and Kansas to eastern Colorado were generally but traces. In the mountain districts of California heavy snows occurred during the last week of the month. Snows occurred in some districts of Washington, and in nearly all sections of Idaho. The average amount of snowfall in Utah for the month was 7.9 inches, which was 4.2 inches above the normal.

At the end of the month snow remained on the ground in New England, the northern part of the Middle Atlantic States, the upper Ohio Valley, Lake region, the upper Mississippi and central Missouri valleys, North Dakota, and in the western mountains, but, as a rule, the amount was but small, except on the western mountains.

Average precipitation and departure from the normal.

Districts.	Number of stations.	Average.		Departure.	
		Current month.	Percentage of normal.	Current month.	Accumulated since Jan. 1.
		<i>Inches.</i>		<i>Inches.</i>	<i>Inches.</i>
New England.....	8	1.29	31	-2.9	-4.3
Middle Atlantic.....	12	2.54	83	-0.5	-1.4
South Atlantic.....	10	4.20	145	+1.3	-10.4
Florida Peninsula*.....	8	3.15	147	+1.0	+1.3
East Gulf.....	9	3.49	92	-0.3	-10.0
West Gulf.....	7	5.86	148	+1.9	-5.1
Ohio Valley and Tennessee.....	11	3.25	89	-0.4	-8.0
Lower Lake.....	8	1.53	49	-1.6	-1.2
Upper Lake.....	10	2.41	100	0.0	-2.8
North Dakota*.....	8	0.29	42	-0.4	+0.8
Upper Mississippi Valley.....	11	2.27	105	+0.1	+1.6
Missouri Valley.....	11	1.46	116	+0.2	+1.1
Northern Slope.....	7	0.38	79	-0.1	+0.1
Middle Slope.....	6	1.95	205	+1.0	+3.9
Southern Slope*.....	6	3.87	232	+2.2	+5.0
Southern Plateau*.....	13	1.82	258	+1.1	-0.8
Middle Plateau*.....	8	1.08	123	-0.2	-2.0
Northern Plateau*.....	12	2.41	141	-0.7	-1.0
North Pacific.....	7	10.03	154	+3.5	+3.5
Middle Pacific.....	5	4.88	149	+1.6	+3.1
South Pacific.....	4	1.84	137	+0.5	+0.1

*Regular Weather Bureau and selected voluntary stations.

In Canada.—Professor Stupart says:

The precipitation was apparently very nearly average in British Columbia, and at low levels it was almost entirely rain. In the Northwest Territories and Manitoba, where it was chiefly in the form of light snowfalls, it was also nearly average; in some localities slightly in excess, and in others, to a small extent, deficient. From Lake Superior eastward to the Maritime Provinces there was a very general and marked deficiency, in many districts not more than half the average amount being recorded. Until the last week, in Ontario and Quebec, the precipitation was almost altogether in the form of rain, but during the last few days snow fell to the depth of several inches in nearly all localities.

At the close of the month the mountains and northern portions of British Columbia were snow covered to a considerable depth; nearly all the prairies of the Northwest Territories and Manitoba had a light covering, and in parts of Saskatchewan the snow was reported to be deep. In Ontario the depth was from 2 to 6 inches, and in the northern and eastern parts of the province there was a light covering, while in the more southern and southwestern portions there were only patches here and there.

In Quebec the depth ranged from 2 or 3 inches in western districts to about 10 inches in the eastern portion of the province, while over nearly the whole of the Maritime Provinces the ground was bare.

HAIL.

The following are the dates on which hail fell in the respective States:

Arizona, 12, 29. Arkansas, 28. California, 1, 11, 12, 16, 18, 19, 29. Colorado, 12, 22, 23. Connecticut, 12, 24. Idaho, 16, 27. Illinois, 10. Indiana, 10, 16. Iowa, 1. Kentucky, 26, 30. Maine, 12, 13, 26. Massachusetts, 11, 26, 30. Michigan, 6, 7, 15, 22, 24. Minnesota, 4, 14. Mississippi, 24. Nebraska, 1. New Hampshire, 12, 13, 26, 27. New Mexico, 1, 22. New York, 11, 22, 23, 24, 26, 27, 30. North Dakota, 11. Ohio, 29. Oregon, 11, 16, 17, 18, 21, 24, 27, 28, 30. Pennsylvania, 26, 30. Rhode Island, 23. South Dakota, 12. Texas, 12, 15, 20. Utah, 7, 11, 12, 19, 21, 27. Virginia, 27. Washington, 2, 3, 8, 11, 12, 17, 18, 23, 24, 27, 30. Wisconsin, 14.

SLEET.

The following are the dates on which sleet fell in the respective States:

Alabama, 27, 28, 29. Arkansas, 18, 28. California, 16, 18, 19. Colorado, 1, 11, 12, 22, 24. Connecticut, 23, 30. Georgia, 26, 27. Illinois, 16, 26, 27, 28, 29. Indiana, 26, 27. Iowa, 13, 14, 23, 24, 26, 28, 30. Kansas, 10, 12, 24. Kentucky, 26, 27, 30. Maine, 12, 13, 19, 23, 26, 28. Maryland, 29, 30. Massachusetts, 11, 13, 25, 26, 27. Michigan, 6, 7, 11, 15, 26, 29. Minnesota, 11, 12, 13, 14, 26, 28. Mississippi, 26. Missouri, 26, 27, 28, 29. Montana, 3, 7, 8, 9, 11. Nebraska, 9, 10, 11, 12, 13, 14, 28. Nevada, 10, 19, 21. New Hampshire, 12,

23, 26, 27. New Jersey, 30. New Mexico, 22. New York, 2, 3, 12, 13, 23, 25, 26, 27, 28, 30. North Carolina, 27, 28. North Dakota, 11, 12, 13, 14, 19, 20. Ohio, 25, 26, 29. Oregon, 18, 28, 29. Pennsylvania, 25, 26, 29, 30. South Carolina, 27. South Dakota, 9, 11, 12, 20. Tennessee, 26, 27, 28, 30. Texas, 29, 30. Utah, 11, 14, 18, 19, 20, 21, 22, 23, 24, 27. Vermont, 13, 27, 28. Washington, 3, 6, 7, 8, 9, 10, 16, 17, 18, 23, 24, 27, 28, 29. West Virginia, 29, 30. Wisconsin, 2, 6, 9, 15, 26, 29. Wyoming, 7, 11.

WIND.

The maximum wind velocity at each Weather Bureau station for a period of five minutes is given in Table I, which also gives the altitude of Weather Bureau anemometers above ground.

Following are the velocities of 50 miles and over per hour registered during the month:

Maximum wind velocities.

Stations.	Date.	Velocity.	Direction.	Stations.	Date.	Velocity.	Direction.
Block Island, R. I.....	26	60	e.	New York, N. Y.....	28	60	nw.
Buffalo, N. Y.....	6	55	sw.	North Head, Wash.....	1	50	se.
Do.....	24	56	w.	Do.....	2	73	se.
Do.....	29	66	sw.	Do.....	7	52	se.
Do.....	30	60	w.	Do.....	9	62	se.
Cape Henry, Va.....	23	51	nw.	Do.....	10	60	se.
Carson City, Nev.....	13	60	sw.	Do.....	13	60	se.
Chicago, Ill.....	14	50	sw.	Do.....	15	52	s.
Do.....	23	52	sw.	Do.....	16	65	s.
Do.....	29	50	sw.	Do.....	17	72	s.
Miles City, Mont.....	9	60	n.	Do.....	27	50	nw.
Mount Tamalpais, Cal.....	8	60	se.	Do.....	28	62	nw.
Do.....	9	56	sw.	Do.....	30	60	s.
Do.....	16	70	nw.	Port Reyes Light, Cal.....	8	60	se.
Do.....	19	55	n.	Do.....	9	82	se.
Do.....	20	60	ne.	Do.....	16	60	nw.
Do.....	28	60	nw.	Do.....	18	50	w.
Nantucket, Mass.....	26	51	e.	Do.....	27	51	nw.
Neah Bay, Wash.....	6	56	ne.	Do.....	28	75	nw.
New York, N. Y.....	22	60	nw.	Do.....	29	63	nw.
Do.....	23	56	nw.	Williston, N. Dak.....	25	50	nw.

SUNSHINE AND CLOUDINESS.

The distribution of sunshine is graphically shown on Chart VII, and the numerical values of average daylight cloudiness, both for individual stations and by geographical districts, appear in Table I.

The averages for the various districts, with departures from the normal, are shown in the table below:

Average cloudiness and departures from the normal.

Districts.	Average.	Departure from the normal.	Districts.	Average.	Departure from the normal.
New England.....	6.5	+0.9	Missouri Valley.....	5.9	+1.0
Middle Atlantic.....	6.0	+0.8	Northern Slope.....	5.2	+0.6
South Atlantic.....	5.4	+0.9	Middle Slope.....	5.8	+2.2
Florida Peninsula.....	5.1	+0.5	Southern Slope.....	5.6	+2.4
East Gulf.....	5.6	+1.1	Southern Plateau.....	3.2	+0.9
West Gulf.....	6.3	+1.7	Middle Plateau.....	4.9	+1.3
Ohio Valley and Tennessee.....	6.5	+0.8	Northern Plateau.....	6.6	+0.6
Lower Lake.....	6.7	+0.5	North Pacific.....	3.4	+1.6
Upper Lake.....	7.6	+0.6	Middle Pacific.....	5.3	+1.5
North Dakota.....	6.0	+0.7	South Pacific.....	3.5	+0.6
Upper Mississippi Valley.....	6.8	+1.5			

ATMOSPHERIC ELECTRICITY.

Numerical statistics relative to auroras and thunderstorms are given in Table IV, which shows the number of stations from which meteorological reports were received, and the number of such stations reporting thunderstorms (T) and auroras (A) in each State and on each day of the month, respectively.

Thunderstorms.—Reports of 481 thunderstorms were received during the current month as against 353 in 1901 and 1,800 during the preceding month.

The dates on which the number of reports of thunderstorms for the whole country was most numerous were: 2d, 52; 1st, 48; 16th, 43.

Reports were most numerous from: Texas, 103; Indiana, 27; Illinois, 26.

Auroras.—The evenings on which bright moonlight must have interfered with observations of faint auroras are assumed to be the four preceding and following the date of full moon, viz: 15th to 19th.

In Canada: No thunderstorms were reported. Auroras were reported at Grand Manan, Quebec, Minnedosa, Qu'Appelle, and Swift Current on the 23d, at Battleford on the 24th, and at Port Arthur on the 25th.

HUMIDITY.

The averages by districts appear in the subjoined table:

Average relative humidity and departures from the normal.

Districts.	Average.	Departure from the normal.	Districts.	Average.	Departure from the normal.
New England	81	+ 3	Missouri Valley	76	+ 5
Middle Atlantic	80	+ 4	Northern Slope	72	+ 6
South Atlantic	83	+ 4	Middle Slope	74	+ 12
Florida Peninsula	81	0	Southern Slope	78	+ 17
East Gulf	79	+ 2	Southern Plateau	80	+ 4
West Gulf	82	+ 9	Middle Plateau	62	+ 8
Ohio Valley and Tennessee	78	+ 5	Northern Plateau	75	+ 2
Lower Lake	77	+ 1	North Pacific	88	+ 1
Upper Lake	80	0	Middle Pacific	79	+ 6
North Dakota	77	- 2	South Pacific	72	+ 5
Upper Mississippi Valley	80	+ 6			

DESCRIPTION OF TABLES AND CHARTS.

By W. B. STOCKMAN, Forecast Official, in charge of Division of Records and Meteorological Data.

For description of tables and charts see page 491 of REVIEW for October, 1902.